

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
**PROPOSED  
HIGHWAY PLANS**

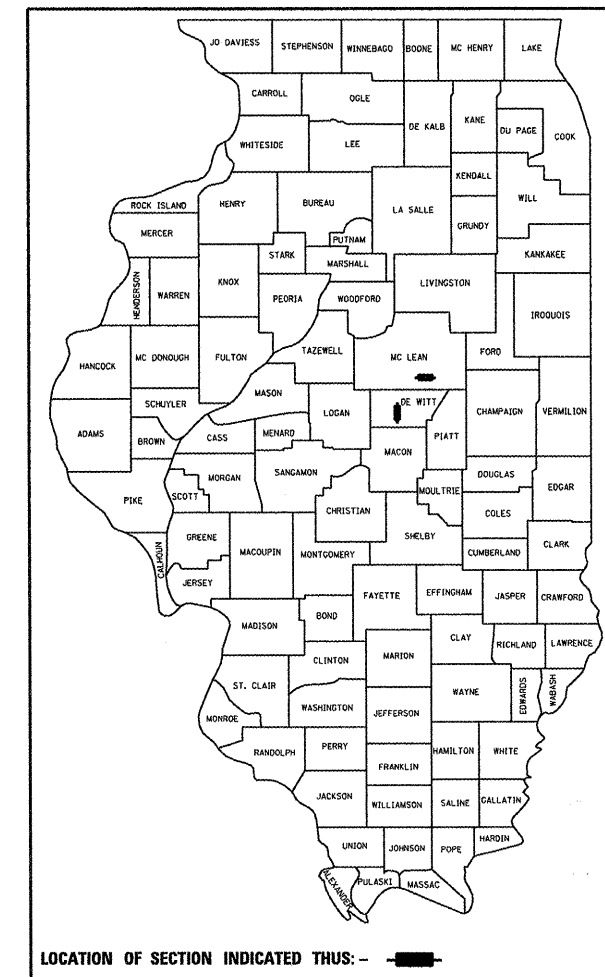
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	4TS & 49TS	••	12	1
ILLINOIS CONTRACT NO. 70821				

• F.A.P. 708 & F.A.S. 1517  
•• DEWITT & MCLEAN

D95-056-09

FOR INDEX OF SHEETS, SEE SHEET NO. 2

F.A.P. ROUTE 708 (U.S. 51 BUSN.)  
F.A.S. ROUTE 1517 (U.S. 150)  
SECTION 4TS & 49TS  
TRAFFIC SIGNAL MODERNIZATION  
FLASHING BEACON MODERNIZATION  
DEWITT COUNTY  
MCLEAN COUNTY

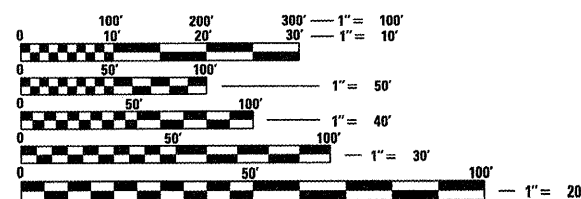


TRAFFIC SIGNAL MODERNIZATION  
U.S. 51 BUSN. & MAIN ST.

FLASHING BEACON MODERNIZATION  
U.S. 150 & U.S. 136

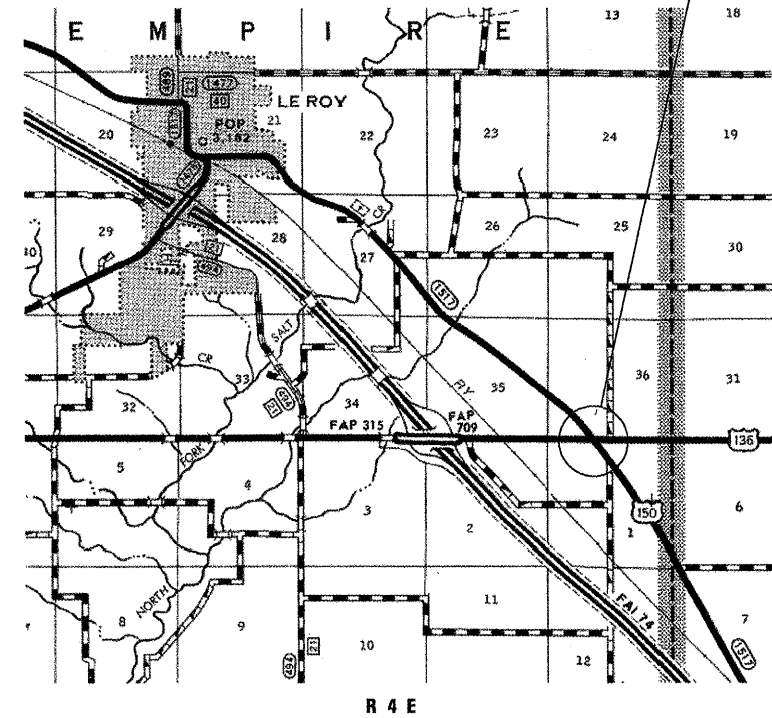
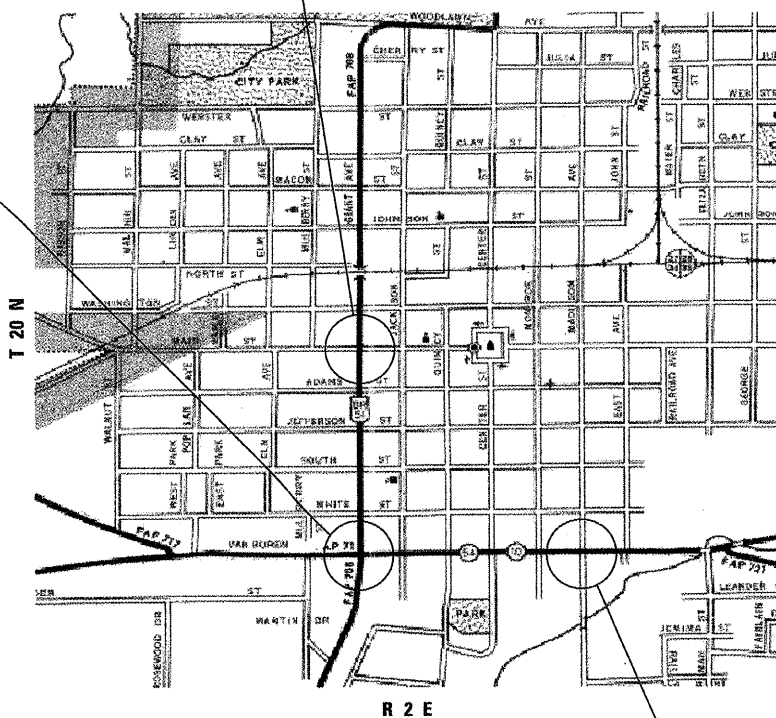
C-95-056-09

CONTROLLER & CABINET REPLACEMENT  
U.S. 51 BUSN. & IL54/10



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.  
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION  
1-800-892-0123  
OR 811



SIGNAL HEAD MODULE REPLACEMENT  
IL10/54 (VAN BUREN ST.) & MADISON AVE.

PROJECT ENGINEER: SCOTT NEIHART  
DESIGNER: ROGER BIGGS

CITY OF CLINTON  
CLINTONIA TOWNSHIP  
DEWITT COUNTY

EMPIRE TOWNSHIP  
MCLEAN COUNTY

CONTRACT NO. 70821

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED 02/05 20 10  
Joseph C. Clough  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

March 19, 20 10  
Scott E. Steed, P.E.  
ENGINEER OF DESIGN AND ENVIRONMENT

March 19, 20 10  
Christine M. Reed  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

**PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS**

GENERAL NOTES

G.N.-100

ENGLISH UNITS OF MEASUREMENT SHALL GOVERN OVER AND SUPERSEDE ANY METRIC UNITS SHOWN IN THIS CONTRACT. WHERE INCLUDED, METRIC UNITS ARE FOR INFORMATION ONLY.

G.N.-105.07

EXISTING STATE-OWNED AND MAINTAINED UTILITY LINES ARE SHOWN ON THE PLANS TO INDICATE THEIR PRESENCE AND APPROXIMATE LOCATION. THE CONTRACTOR SHALL NOTIFY THE DISTRICT OPERATIONS ENGINEER TWO WEEKS PRIOR TO COMMENCING ANY EXCAVATION IN THE VICINITY OF THESE LINES. THE STATE WILL THEN LOCATE AND MARK THE HORIZONTAL LOCATIONS OF THE LINES AND PROVIDE ANY AVAILABLE INFORMATION AS TO THEIR DEPTH. SHOULD ANY OF THE LINES BE DAMAGED BY THE CONTRACTOR'S OPERATION, THE CONTRACTOR SHALL REPAIR THEM TO THE SATISFACTION OF THE ENGINEER AND AT NO COST TO THE STATE.

ALSO THERE MAY BE UTILITIES PRESENT WHICH WERE INSTALLED BY THE STATE BUT ARE MAINTAINED BY OTHERS (CITY, TOWN, ETC.) THE APPROXIMATE LOCATIONS OF THESE LINES ARE ALSO SHOWN ON THE PLANS ALONG WITH THE NAME OF THE MAINTAINING AGENCY. THE CONTRACTOR SHALL COORDINATE THE LOCATING OF THESE LINES WITH THE LOCAL AGENCY PRIOR TO COMMENCING ANY EXCAVATION OR BORING IN THEIR VICINITY. SHOULD THESE LINES BE DAMAGED BY THE CONTRACTOR'S OPERATIONS, THE CONTRACTOR SHALL REPAIR THEM TO THE SATISFACTION OF, AND AT NO COST TO, THE LOCAL AGENCY AND THE STATE.

G.N.-107.31

UTILITY LINES WERE PLOTTED FROM INFORMATION FURNISHED BY THE VARIOUS UTILITY COMPANIES INVOLVED (QUALITY LEVEL C &/OR QUALITY LEVEL D) AND THE ACCURACY SHOULD BE CONSIDERED APPROXIMATE ONLY.

UTILITY COMPANIES MAY BE ADJUSTING THEIR FACILITIES DURING CONSTRUCTION. THE CONTRACTOR SHALL COOPERATE WITH THESE ORGANIZATIONS WHILE THESE ADJUSTMENTS ARE BEING PERFORMED. J.U.L.I.E. - JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS SYSTEM (800)892-0123 OR 811.

G.N.-1004.01

COARSE AGGREGATE GRADATION CA-10 MAY BE USED WHENEVER COARSE AGGREGATE CA-6 IS SPECIFIED IN THE STANDARD SPECIFICATIONS.

STANDARDS IN THE PLANS

STANDARD	DESCRIPTION
000001-05	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
701006-03	OFF-ROAD OPERATIONS 2-LANE 2-WAY 15 FT. TO EDGE OF PAVEMENT
701502-03	URBAN LANE CLOSURE 2-LANE 2-WAY BI DIRECTIONAL TURN LANE
701701-06	URBAN CLOSURE MULTILANE INTERSECTION
701801-04	LANE CLOSURE MULTILANE, CROSSWALK OR SW
701901-01	TRAFFIC CONTROL DEVICES
720016-02	MAST ARM MOUNTED STREET NAME SIGNS
805001-01	ELECTRIC SERVICE INSTALLATION DETAILS
814001-02	HANDHOLES
814006-02	DOUBLE HANDHOLES
857001-01	STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCE
873001-02	TRAFFIC SIGNAL GROUNDING AND BONDING
876001-01	PEDESTRIAN PUSH BUTTON POST
877001-04	STEEL MAST ARM ASSEMBLY AND POLE
878001-08	CONCRETE FOUNDATION DETAILS
880001-01	SPAN WIRE MOUNTED SIGNALS & FLASHING BEACON INSTALLATION
880006-01	TRAFFIC SIGNAL MOUNTING DETAILS - POST AND BRACKET MOUNT
886001-01	DETECTOR LOOP INSTALLATIONS
886006-01	TYPICAL LAYOUTS FOR DETECTION LOOPS

INDEX OF SHEETS

1	COVER SHEET
2	GENERAL NOTES, STANDARDS IN THE PLANS, INDEX
3-5	SUMMARY OF QUANTITIES
6	FLASHING BEACON INSTALLATION
7-9	TRAFFIC SIGNAL MODERNIZATION PLANS
10	TRAFFIC SIGNAL DETAILS
11	U.S. 51 BUS. & IL 10/54 SIGNAL WORK
12	IL 10/54 & MADISON AVE. SIGNAL WORK

FILE NAME =	USER NAME = biggard	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>* F.A.P. 708 &amp; F.A.S. 1517 ** DEWITT &amp; MCLEAN</b>	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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	PLOT SCALE = 40,0000 / IN.	CHECKED -	REVISED -			CONTRACT NO. 70821					
	PLOT DATE = 2/19/2018	DATE -	REVISED -			ILLINOIS FED. AID PROJECT					
				SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.		

## SUMMARY OF QUANTITIES

		LOCATION OF WORK:					
		CONSTRUCTION TYPE CODE:	RURAL	URBAN	URBAN	URBAN	
CODE NO	ITEM	UNIT	TOTAL QUANTITY	Y031-1F	Y031-1F	Y031-1F	Y031-1F
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	42.0		42.0		
42400610	TEMPORARY SIDEWALK	SQ FT	42.0		42.0		
44000600	SIDEWALK REMOVAL	SQ FT	42.0		42.0		
67100100	MOBILIZATION	L SUM	1.0	.2	.4	.2	.2
70102622	TRAFFIC CONTROL AND PROTECTION, STANDARD 701502	L SUM	1.0		1.0		
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1.0	.2	.4	.2	.2
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1.0	.2	.4	.2	.2
80500100	SERVICE INSTALLATION, TYPE A	EACH	1.0	1.0			
80500105	SERVICE INSTALLATION, TYPE A (MODIFIED)	EACH	1.0		1.0		
81012300	CONDUIT IN TRENCH, 1" DIA., PVC	FOOT	117.0		117.0		
81012500	CONDUIT IN TRENCH, 1 1/2" DIA., PVC	FOOT	148.0		148.0		
81012600	CONDUIT IN TRENCH, 2" DIA., PVC	FOOT	100.0		100.0		
81012700	CONDUIT IN TRENCH, 2 1/2" DIA., PVC	FOOT	60.0		60.0		
81013000	CONDUIT IN TRENCH, 4" DIA., PVC	FOOT	2.0		2.0		
81021540	CONDUIT, AUGERED 1 1/2" DIA., PVC	FOOT	206.0		206.0		
81021570	CONDUIT, AUGERED 3" DIA., PVC	FOOT	155.0		155.0		
81021590	CONDUIT, AUGERED 4" DIA., PVC	FOOT	86.0		86.0		
81400100	HANDHOLE	EACH	6.0		6.0		
81400300	DOUBLE HANDHOLE	EACH	1.0		1.0		
81702420	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 8	FOOT	46.0	46.0			
81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	427.0		427.0		
81800340	AERIAL CABLE, 3-1/C NO. 8 WITH MESSENGER WIRE	FOOT	141.0	141.0			
82102250	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 250 WATT	EACH	2.0	2.0			
82500505	LIGHTING CONTROLLER, SPECIAL	EACH	1.0	1.0			
85700200	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	2.0		1.0	1.0	
83057245	LIGHT POLE, WOOD, 45 FOOT, CLASS 3, WITH 15FT MAST ARM	EACH	2.0	2.0			
87200400	SPAN WIRE	FOOT	134.0	134.0			
87200500	TETHER WIRE	FOOT	134.0	134.0			
87301225	ELECTRIC CABLE IN CONDUIT, SIGNALNO. 14 3C	FOOT	560.0	44.0	516.0		
87301245	ELECTRIC CABLE IN CONDUIT, SIGNALNO. 14 5C	FOOT	662.0		662.0		
87301255	ELECTRIC CABLE IN CONDUIT, SIGNALNO. 14 7C	FOOT	1,337.0		1,337.0		

FILE NAME =	USER NAME = biggsrd	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	* F.A.P. 708 & F.A.S. 1517 ** DEWITT & MCLEAN	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
ca\p_w\work\FWIDOT\BIGGSRD\00145306\7882	sh_t_signals-flasher.dgn	DRAWN -	REVISED -			*	4TS & 49TS	**	12	3	
PLOT SCALE = 40.0000' / IN.	CHECKED -	REVISED -	REVISED -			CONTRACT NO. 70821					
PLOT DATE = 2/5/2010	DATE -	REVISED -	REVISED -			ILLINOIS FED. AID PROJECT					
					SCALE:	SHEET NO. OF SHEETS		STA. TO STA.			

**SUMMARY OF QUANTITIES (continued)**

CODE NO	ITEM	UNIT	TOTAL QUANTITY	LOCATION OF WORK:			
				RURAL FAS 1517 U.S. 150 & U.S. 136 McLean County 100% STATE	URBAN FAP 708 U.S. 51 BUS. & MAIN ST. DeWitt County 100% STATE	URBAN FAP 708 U.S. 51 BUS. & IL 10/54 DeWitt County 100% STATE	URBAN FAP 71 IL 10/54 & MADISON AVE. DeWitt County 100% STATE
CONSTRUCTION TYPE CODE:			Y031-1F	Y031-1F	Y031-1F	Y031-1F	
87301515	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 18 3 PAIR	FOOT	1,432.0		1,432.0		
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	24.0	24.0			
87302225	ELECTRIC CABLE AERIAL SUSPENDED, SIGNAL, NO. 14 3C	FOOT	141.0	141.0			
87502660	TRAFFIC SIGNAL POST, ALUMINUM 12 FT.	EACH	1.0		1.0		
87502700	TRAFFIC SIGNAL POST, ALUMINUM 16 FT.	EACH	2.0		2.0		
87600200	PEDESTRIAN PUSH-BUTTON POST, TYPE II	EACH	1.0		1.0		
87700230	STEEL MAST ARM ASSEMBLY AND POLE, 38 FT.	EACH	2.0		2.0		
87700240	STEEL MAST ARM ASSEMBLY AND POLE, 40 FT.	EACH	1.0		1.0		
87700280	STEEL MAST ARM ASSEMBLY AND POLE, 48 FT.	EACH	1.0		1.0		
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	9.3		9.3		
87800200	CONCRETE FOUNDATION, TYPE D	FOOT	3.5		3.5		
87800400	CONCRETE FOUNDATION, TYPE E30-INCH DIAMETER	FOOT	27.0		27.0		
87800415	CONCRETE FOUNDATION, TYPE E36-INCH DIAMETER	FOOT	26.0		26.0		
88040070	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2.0		2.0		
88040090	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	6.0		6.0		
88040160	SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	2.0		2.0		
88040260	SIGNAL HEAD, POLYCARBONATE, LED, 2-FACE, 1-3-SECTION, 1-5-SECTION, BRACKET MOUNTED	EACH	2.0		2.0		
88040420	SIGNAL HEAD, POLYCARBONATE, LED, 4-FACE, 1-SECTION, SPAN WIRE MOUNTED	EACH	2.0	2.0			
88102711	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	14.0		2.0	8.0	4.0
88102747	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	3.0		3.0		
88200100	TRAFFIC SIGNAL BACKPLATE	EACH	8.0		8.0		
88500100	INDUCTIVE LOOP DETECTOR	EACH	26.0		10.0	16.0	
88600100	DETECTOR LOOP, TYPE I	FOOT	867.0		867.0		
88800100	PEDESTRIAN PUSH-BUTTON	EACH	8.0		8.0		
89502220	MODIFY EXISTING CONCRETE FOUNDATION	EACH	1.0			1.0	
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1.0		1.0		
89502380	REMOVE EXISTING HANDHOLE	EACH	4.0		4.0		

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PLOT SCALE = 40.0000' / IN.	CHECKED -	REVISED -				CONTRACT NO. 70821					
PLOT DATE = 2/5/2010	DATE -	REVISED -				SCALE:	SHEET NO. OF SHEETS STA.	TO STA.	ILLINOIS FED. AID PROJECT		

**SUMMARY OF QUANTITIES (continued)**

LOCATION OF WORK:

RURAL  
FAS 1517  
U.S. 150  
&  
U.S. 136  
McLean County  
100% STATE

URBAN  
FAP 708  
U.S. 51 BUS.  
&  
MAIN ST.  
DeWitt County  
100% STATE

URBAN  
FAP 708  
U.S. 51 BUS.  
&  
IL 10/54  
DeWitt County  
100% STATE

URBAN  
FAP 71  
IL 10/54  
&  
MADISON AVE.  
DeWitt County  
100% STATE

CONSTRUCTION TYPE CODE:

Y031-1F

Y031-1F

Y031-1F

Y031-1F

CODE NO	ITEM	UNIT	TOTAL QUANTITY	Y031-1F	Y031-1F	Y031-1F	Y031-1F
89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	9.0		9.0		
89502400	REMOVE EXISTING FLASHING BEACON INSTALLATION COMPLETE	EACH	1.0	1.0			
X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	429.0		429.0		
X8803040	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNT, RETROFIT	EACH	2.0			2.0	
X8950105	REMOVE EXISTING TRAFFIC CONTROLLER AND CABINET	EACH	1.0			1.0	
X8803082	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED, RETROFIT	EACH	6.0			2.0	4.0
X8803084	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED, RETROFIT	EACH	14.0			6.0	8.0
X8803088	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED, RETROFIT	EACH	2.0			2.0	

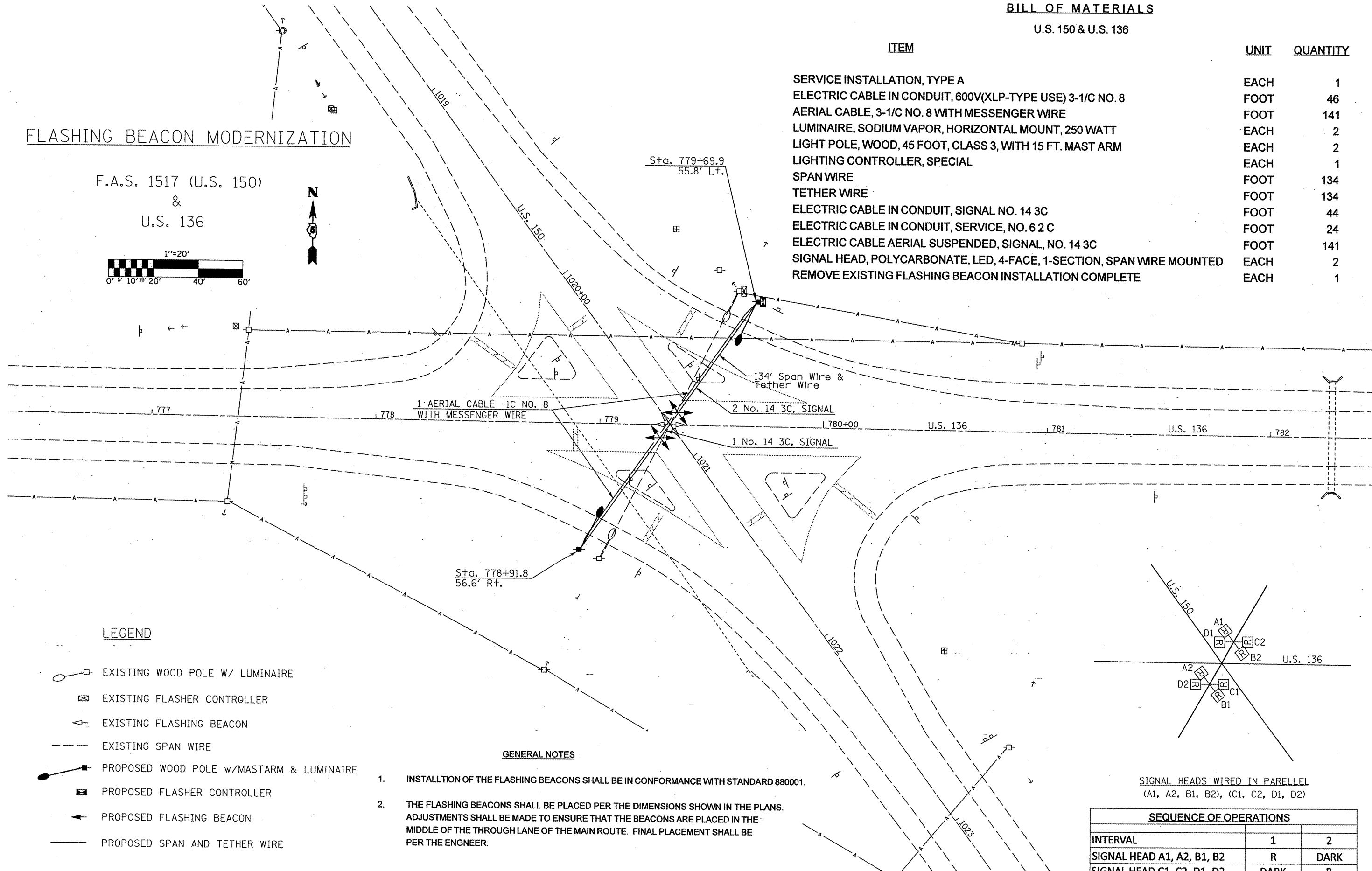
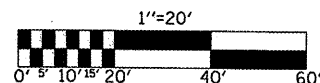
**BILL OF MATERIALS**

U.S. 150 & U.S. 136

ITEM	UNIT	QUANTITY
SERVICE INSTALLATION, TYPE A	EACH	1
ELECTRIC CABLE IN CONDUIT, 600V(XLP-TYPE USE) 3-1/C NO. 8	FOOT	46
AERIAL CABLE, 3-1/C NO. 8 WITH MESSENGER WIRE	FOOT	141
LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 250 WATT	EACH	2
LIGHT POLE, WOOD, 45 FOOT, CLASS 3, WITH 15 FT. MAST ARM	EACH	2
LIGHTING CONTROLLER, SPECIAL	EACH	1
SPAN WIRE	FOOT	134
TETHER WIRE	FOOT	134
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	44
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	24
ELECTRIC CABLE AERIAL SUSPENDED, SIGNAL, NO. 14 3C	FOOT	141
SIGNAL HEAD, POLYCARBONATE, LED, 4-FACE, 1-SECTION, SPAN WIRE MOUNTED	EACH	2
REMOVE EXISTING FLASHING BEACON INSTALLATION COMPLETE	EACH	1

**FLASHING BEACON MODERNIZATION**

F.A.S. 1517 (U.S. 150)  
&  
U.S. 136

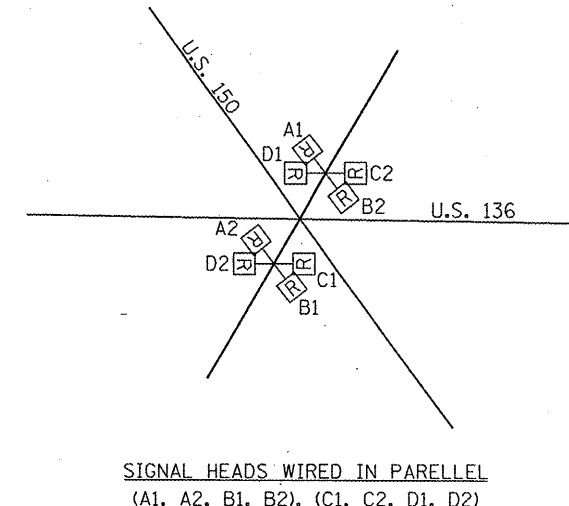


**LEGEND**

- EXISTING WOOD POLE W/ LUMINAIRE
- EXISTING FLASHER CONTROLLER
- EXISTING FLASHING BEACON
- EXISTING SPAN WIRE
- PROPOSED WOOD POLE W/ MASTARM & LUMINAIRE
- PROPOSED FLASHER CONTROLLER
- PROPOSED FLASHING BEACON
- PROPOSED SPAN AND TETHER WIRE

**GENERAL NOTES**

1. INSTALLTION OF THE FLASHING BEACONS SHALL BE IN CONFORMANCE WITH STANDARD 880001.
2. THE FLASHING BEACONS SHALL BE PLACED PER THE DIMENSIONS SHOWN IN THE PLANS. ADJUSTMENTS SHALL BE MADE TO ENSURE THAT THE BEACONS ARE PLACED IN THE MIDDLE OF THE THROUGH LANE OF THE MAIN ROUTE. FINAL PLACEMENT SHALL BE PER THE ENGINEER.



SEQUENCE OF OPERATIONS		
INTERVAL	1	2
SIGNAL HEAD A1, A2, B1, B2	R	DARK
SIGNAL HEAD C1, C2, D1, D2	DARK	R

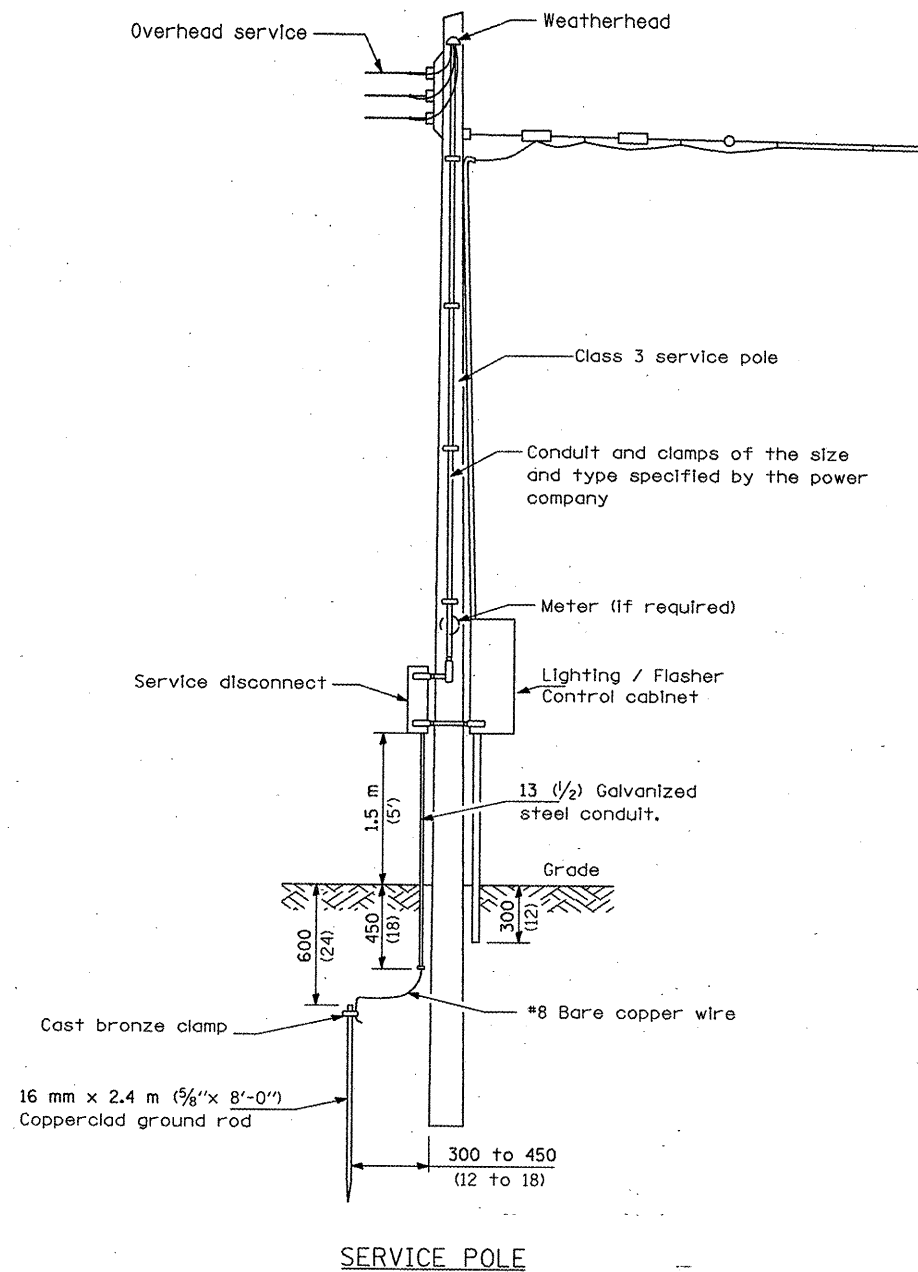
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	PLOT SCALE = 40.0000' / IN.	CHECKED -	REVISED -
	PLOT DATE = 2/19/2010	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

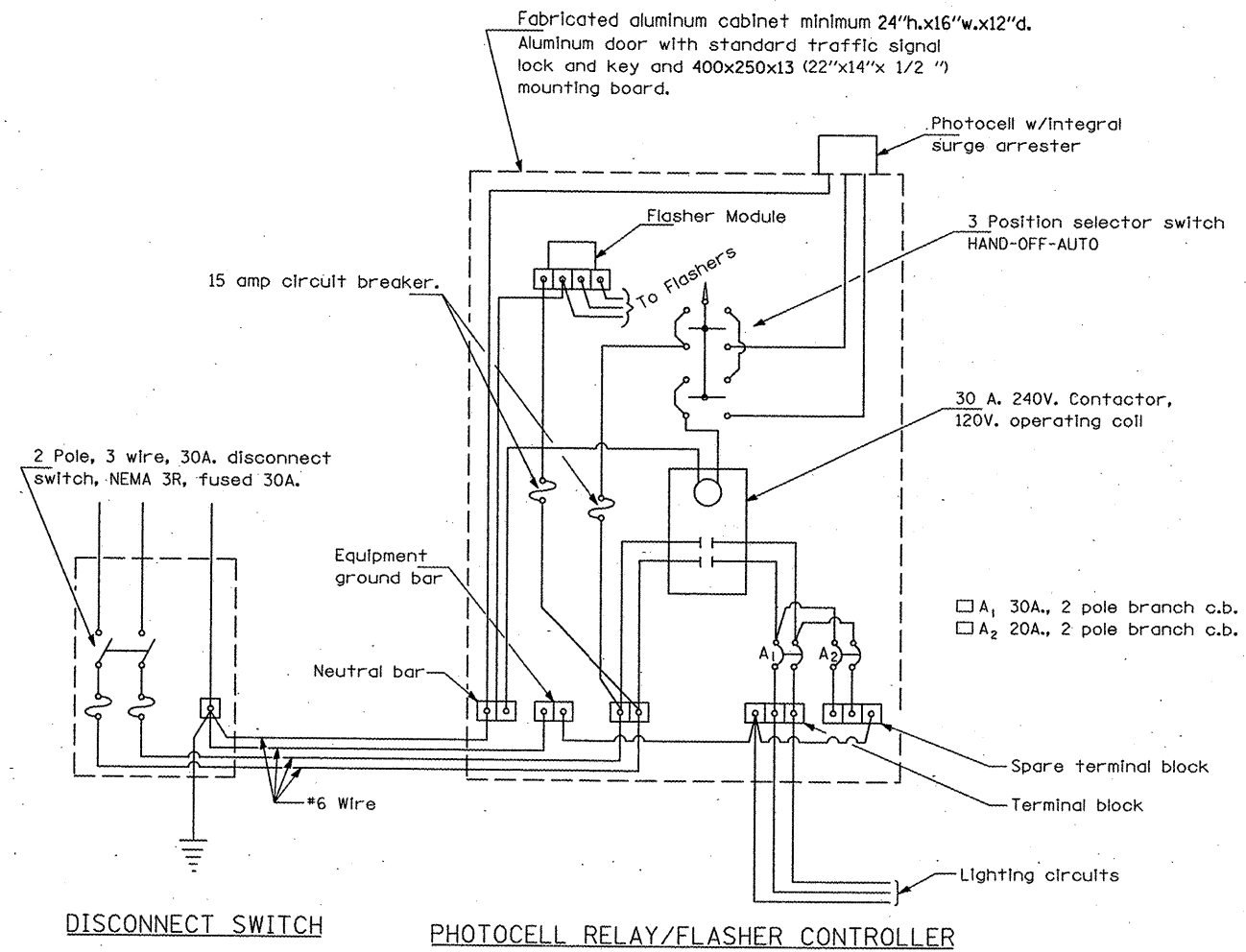
\* F.A.P. 708 & F.A.S. 1517  
\*\* DEWITT & MCLEAN

SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	4TS & 49TS		12	6
			CONTRACT NO. 70821	
[ILLINOIS] FED. AID PROJECT				



NOTE: Flashing Beacon components shall be installed per standard 880001.



GENERAL NOTES

All equipment shall be U.L. Listed.  
All dimensions are in millimeters unless otherwise shown.

**CONTROL INSTALLATION  
SERVICE POLE MOUNTED**

120/240V., 1 PHASE, 3 WIRE SERVICE

FILE NAME =	USER NAME = biggsrd	DESIGNED -	REVISED -
ca:\pwork\pwork\DOT\BIGGSRD\d0145305\7882	-sht_signals-flashers.dgn	DRAWN -	REVISED -
	PLOT SCALE = 40.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 2/17/2010	DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

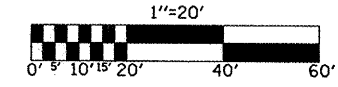
\* F.A.P. 708 & F.A.S. 1517  
\*\* DEWITT & MCLEAN

SCALE: SHEET NO. OF SHEETS STA. TO STA.

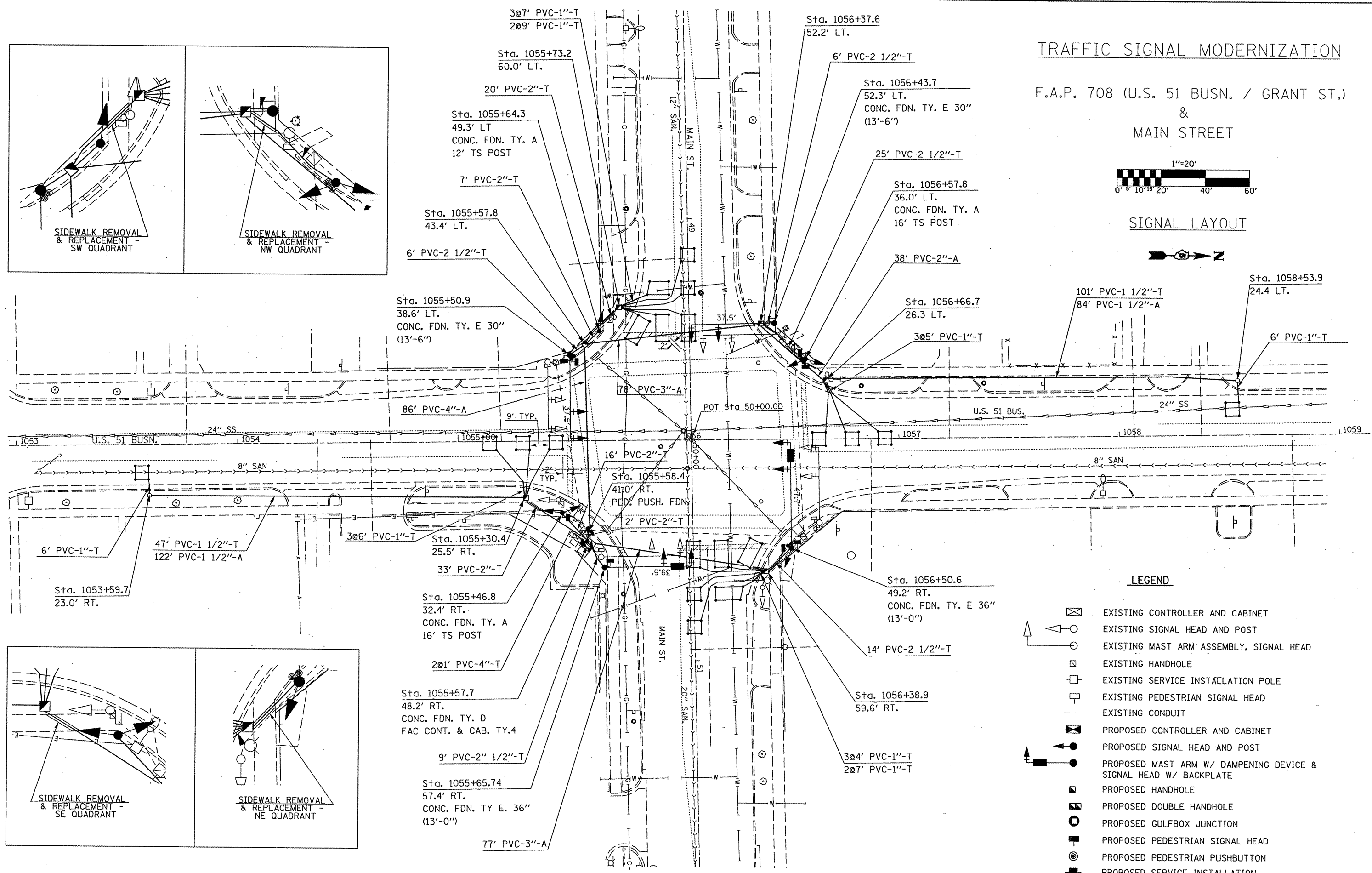
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
.	4TS & 49TS	• •	12	6A
CONTRACT NO. 70821				
ILLINOIS FED. AID PROJECT				

# TRAFFIC SIGNAL MODERNIZATION

F.A.P. 708 (U.S. 51 BUSN. / GRANT ST.)  
&  
MAIN STREET



## SIGNAL LAYOUT



### LEGEND

- EXISTING CONTROLLER AND CABINET
- EXISTING SIGNAL HEAD AND POST
- EXISTING MAST ARM ASSEMBLY, SIGNAL HEAD
- EXISTING HANDHOLE
- EXISTING SERVICE INSTALLATION POLE
- EXISTING PEDESTRIAN SIGNAL HEAD
- EXISTING CONDUIT
- PROPOSED CONTROLLER AND CABINET
- PROPOSED SIGNAL HEAD AND POST
- PROPOSED MAST ARM W/ DAMPENING DEVICE & SIGNAL HEAD W/ BACKPLATE
- PROPOSED HANDHOLE
- PROPOSED DOUBLE HANDHOLE
- PROPOSED GULFBOX JUNCTION
- PROPOSED PEDESTRIAN SIGNAL HEAD
- PROPOSED PEDESTRIAN PUSHBUTTON
- PROPOSED SERVICE INSTALLATION

FILE NAME =	USER NAME = biggerd	DESIGNED -	REVISED -
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	PLOT DATE = 2/19/2010	DATE -	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

\* F.A.P. 708 & F.A.S. 1517  
\*\* DEWITT & MCLEAN

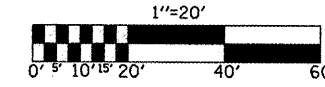
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
.	4TS & 49TS	..	12	7
CONTRACT NO. 70821			ILLINOIS FED. AID PROJECT	

SCALE: SHEET NO. OF SHEETS STA. TO STA.

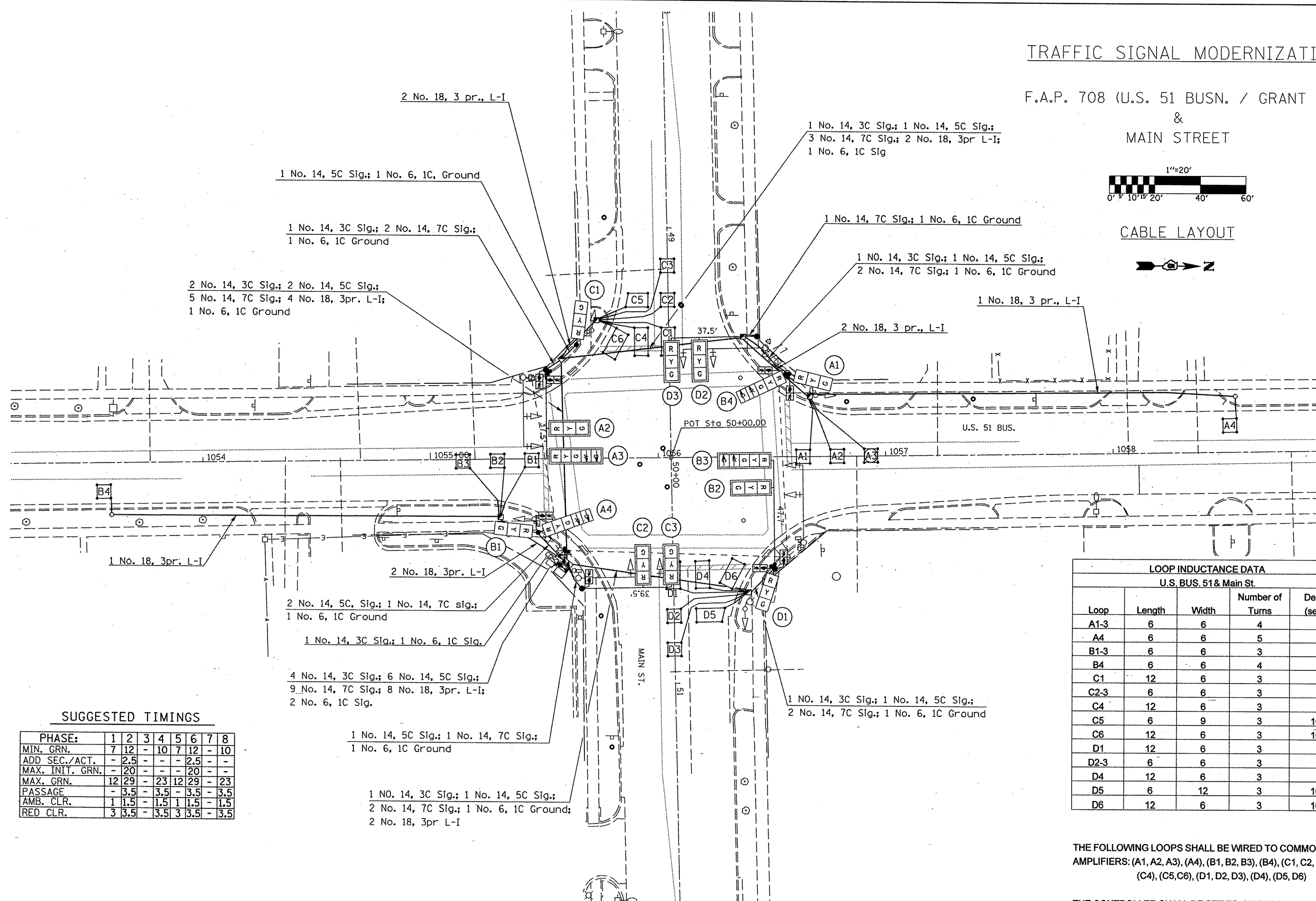


# TRAFFIC SIGNAL MODERNIZATION

F.A.P. 708 (U.S. 51 BUSN. / GRANT ST.)  
&  
MAIN STREET



## CABLE LAYOUT



### SUGGESTED TIMINGS

PHASE:	1	2	3	4	5	6	7	8
MIN. GRN.	7	12	-	10	7	12	-	10
ADD SEC./ACT.	-	2.5	-	-	-	2.5	-	-
MAX. INIT. GRN.	-	20	-	-	20	-	-	-
MAX. GRN.	12	29	-	23	12	29	-	23
PASSAGE	-	3.5	-	3.5	-	3.5	-	3.5
AMB. CLR.	1	1.5	-	1.5	1	1.5	-	1.5
RED CLR.	3	3.5	-	3.5	3	3.5	-	3.5

LOOP INDUCTANCE DATA				
U.S. BUS. 51 & Main St.				
Loop	Length	Width	Number of Turns	Delay (sec.)
A1-3	6	6	4	
A4	6	6	5	
B1-3	6	6	3	
B4	6	6	4	
C1	12	6	3	
C2-3	6	6	3	
C4	12	6	3	
C5	6	9	3	10
C6	12	6	3	10
D1	12	6	3	
D2-3	6	6	3	
D4	12	6	3	
D5	6	12	3	10
D6	12	6	3	10

THE FOLLOWING LOOPS SHALL BE WIRED TO COMMON AMPLIFIERS: (A1, A2, A3), (A4), (B1, B2, B3), (B4), (C1, C2, C3) (C4), (C5, C6), (D1, D2, D3), (D4), (D5, D6)

THE CONTROLLER SHALL BE SET TO MINIMUM RECALL U.S. BUS. 51

FILE NAME =	USER NAME = biggard	DESIGNED -	REVISED -
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STATE OF ILLINOIS  
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.	4TS & 49TS	..	12	8
CONTRACT NO. 70821			ILLINOIS FED. AID PROJECT	

**SCHEDULES**

PC CONC SIDEWALK 5" (REM & REPL)

NW QUAD	20.0
NE QUAD	7.0
SW QUAD	7.0
SE QUAD	8.0

TOTAL = 42.0

HANDHOLE

STA. 1055+30.4; 25.5' RT.	1 EA.
STA. 1055+57.8; 43.4' LT.	1 EA.
STA. 1055+73.2; 60.0' LT.	1 EA.
STA. 1056+37.6; 52.2' LT.	1 EA.
STA. 1056+66.7; 26.3' LT.	1 EA.
STA. 1056+38.9; 59.6' RT.	1 EA.

TOTAL = 6 EACH

CONC FDN TY A

STA. 1055+46.8; 32.4' RT.	3.1 FT.
STA. 1055+64.3; 49.3' LT.	3.1 FT.
STA. 1056+57.8; 36.0' LT.	3.1 FT.

TOTAL = 9.3 FOOT

CONC FDN TY E 30D

STA. 1055+50.9; 38.6' LT.	13.5 FT.
STA. 1056+43.7; 52.3' LT.	13.5 FT.

TOTAL = 27.0 FOOT

GENERAL NOTES

- LOOPS A4 AND B4 SHALL PROVIDE DILEMMA ZONE PROTECTION DURING PHASE GREEN AND SERVE AS COUNTERS TO EXTEND INITIAL GREEN DURING PHASE RED.
- THE FINAL LOCATIONS OF ALL TRAFFIC CONTROL ITEMS SHALL BE VERIFIED BY THE ENGINEER IN THE FIELD.
- ALL TRAFFIC SIGNAL MAST ARMS MUST BE DESIGNED FOR THE LOADINGS SHOWN ON THE HIGHWAY STANDARDS OR THESE SIGNAL PLANS, WHICHEVER IS GREATER.
- TIMINGS SHOWN ARE FOR INITIAL OPERATION AND MAY BE ADJUSTED TO REFLECT SITE CONDITIONS PER APPROVAL OF THE TRAFFIC OPERATIONS ENGINEER.
- SIGNAL FACES FOR THE NORTH APPROACH ARE NOTED AS "A", "B" FOR THE SOUTH APPROACH, "C" FOR THE WEST APPROACH, AND "D" FOR THE EAST APPROACH.
- ITEMS REMOVED WILL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE NOTED ON THE PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ELECTRICAL SERVICE FOR THE TRAFFIC SIGNALS. THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANY PRIOR TO COMMENCEMENT OF WORK TO OBTAIN UTILITY COMPANY REQUIREMENTS FOR THE SERVICE INSTALLATION

CONC FDN TY E 36D

STA. 1055+65.7; 57.4' RT.	13.0 FT.
STA. 1056+50.6; 49.2' RT.	13.0 FT.
	26.0 FOOT

REMOVE EXISTING HANDHOLE

STA. 1055+56.3; 41' RT.	1 EA.
STA. 1055+44.6; 35' LT.	1 EA.
STA. 1056+52.9; 41' RT.	1 EA.
STA. 1056+56.0; 44' LT.	1 EA.

TOTAL = 4 EACH

REMOVE EXISTING CONCRETE FOUNDATION

STA. 1055+45.1; 26.6' RT.	1 EA.
STA. 1055+53.4; 44.2' RT.	1 EA.
STA. 1055+64.2; 52.7' RT.	1 EA.
STA. 1055+40.9; 35.5' LT.	1 EA.
STA. 1055+71.7; 55.5' LT.	1 EA.
STA. 1056+37.3; 67.0' RT.	1 EA.
STA. 1056+63.3; 37.7' RT.	1 EA.
STA. 1056+47.4; 47.3' LT.	1 EA.
STA. 1056+69.3; 26.8' LT.	1 EA.

TOTAL = 9 EACH

**BILL OF MATERIALS**

U.S. 51 BUS. & MAIN STREET

ITEM	UNIT	QUANTITY
PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	42
TEMPORARY SIDEWALK	SQ FT	42
SIDEWALK REMOVAL	SQ FT	42
SERVICE INSTALLATION, TYPE A, MODIFIED	EACH	1
CONDUIT IN TRENCH, 1" DIA., PVC	FOOT	117
CONDUIT IN TRENCH, 1 1/2" DIA., PVC	FOOT	148
CONDUIT IN TRENCH, 2" DIA., PVC	FOOT	100
CONDUIT IN TRENCH, 2 1/2" DIA., PVC	FOOT	60
CONDUIT IN TRENCH, 4" DIA., PVC	FOOT	2
CONDUIT, AUGERED 1 1/2" DIA., PVC	FOOT	206
CONDUIT, AUGERED 3" DIA., PVC	FOOT	155
CONDUIT, AUGERED 4" DIA., PVC	FOOT	86
HANDHOLE	EACH	6
DOUBLE HANDHOLE	EACH	1
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	427
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	516
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	662
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1337
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 18 3 PAIR	FOOT	1432
TRAFFIC SIGNAL POST, GALVANIZED STEEL 12 FT.	EACH	1
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	2
PEDESTRIAN PUSH-BUTTON POST, TYPE II	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 38 FT.	EACH	2
STEEL MAST ARM ASSEMBLY AND POLE, 40 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 48 FT.	EACH	1
CONCRETE FOUNDATION, TYPE A	FOOT	9.3
CONCRETE FOUNDATION, TYPE D	FOOT	3.5
CONCRETE FOUNDATION, TYPE E30-INCH DIAMETER	FOOT	27
CONCRETE FOUNDATION, TYPE E36-INCH DIAMETER	FOOT	26
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	6
SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	2
SIGNAL HEAD, POLYCARBONATE, LED, 2-FACE, 1-3-SECTION, 1-5-SECTION, BRACKET MOUNTED	EACH	2
PEDESTRIAN SIGNAL HEAD, POLYCARBONATE, LED, 1-FACE, BRACKET MOUNTED	EACH	2
PEDESTRIAN SIGNAL HEAD, POLYCARBONATE, LED, 2-FACE, BRACKET MOUNTED	EACH	3
TRAFFIC SIGNAL BACKPLATE	EACH	8
INDUCTIVE LOOP DETECTOR	EACH	10
DETECTOR LOOP, TYPE I	FOOT	867
PEDESTRIAN PUSH-BUTTON	EACH	8
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING HANDHOLE	EACH	4
REMOVE EXISTING CONCRETE FOUNDATION	EACH	9
ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	429

GENERAL NOTES

- THE FOLLOWING SIGNAL HEADS SHALL BE WIRED IN PARALLEL AT THE MAST POLE HANDHOLE: (A2, A3), (B2, B3), (C2, C3), (C4, C5), (D3, D4) - EACH MAST ARM MOUNTED SIGNAL HEAD SHALL HAVE ITS OWN INDIVIDUAL CABLE FROM THE MAST POLE HANDHOLE TO THE SIGNAL HEAD.
- THE ACTUAL LOCATION OF ALL SIGNAL FOUNDATIONS, HANDHOLES, AND TRAFFIC CONTROLLER WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- POST MOUNTED SIGNALS SHALL BE INSTALLED SO THAT NO PART OF THE SIGNAL HEAD IS WITHIN 2 FT. OF THE FACE OF CURB.
- ALL MAST ARM POLES SHALL BE A MINIMUM OF 6 FT. FROM THE CENTER OF THE POLE TO THE FACE OF CURB (ON THE MAST ARM SIDE) OR AS SHOWN ON THE PLANS.
- ALIGN ADJACENT RED INDICATIONS TO SAME HEIGHT ABOVE PAVEMENT.
- THE BASE FOR A TRAFFIC SIGNAL POST SHALL BE SITUATED SUCH THAT THE HANDHOLE IS LOCATED ON A SIDE AWAY FROM A TRAVELED LANE.
- PEDESTRIAN PUSHBUTTON SIGNAL SIGNS SHALL BE MOUNTED ABOVE THE APPROPRIATE PEDESTRIAN PUSHBUTTON.
- THE ANTI-BACKUP FEATURE SHALL BE HARDWIRED ON THE BACKPANEL OF THE CONTROLLER CABINET.
- MASTARM MOUNTED SIGNAL HEADS OVER THROUGH DRIVING LANES SHALL BE ALIGNED OVER THE MIDDLE OF THE DRIVING LANE. MASTARM MOUNTED SIGNAL HEADS OVER LEFT TURN LANES SHALL BE OFFSET 1' FROM THE MIDDLE OF THE LEFT TURN LANE TOWARDS THE MASTARM POLE TO PREVENT MASKING OF OPPOSING LEFT TURN INDICATIONS.

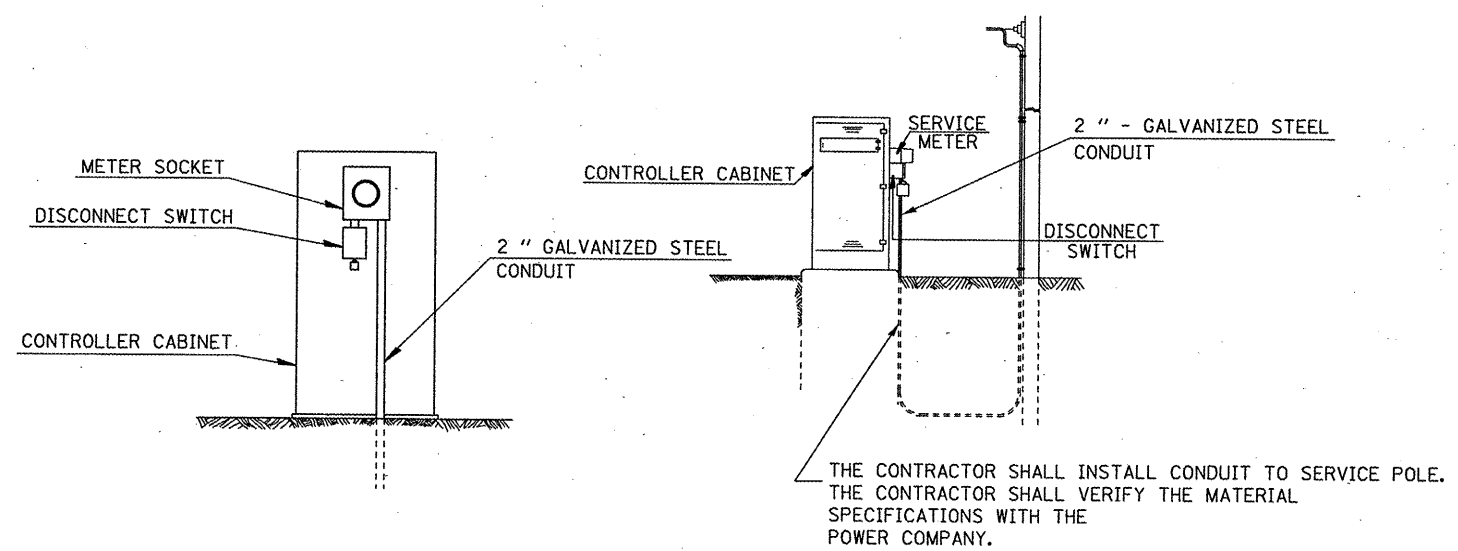
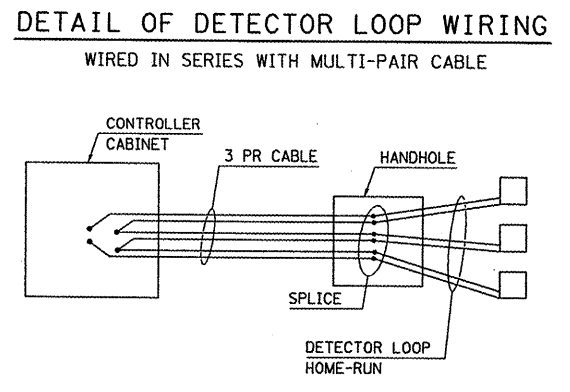
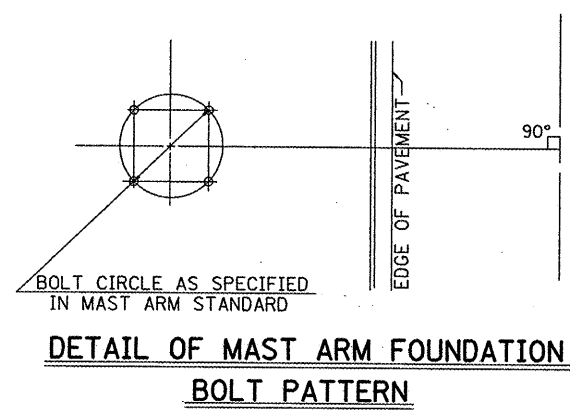
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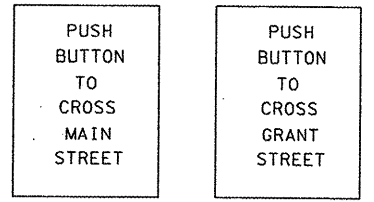
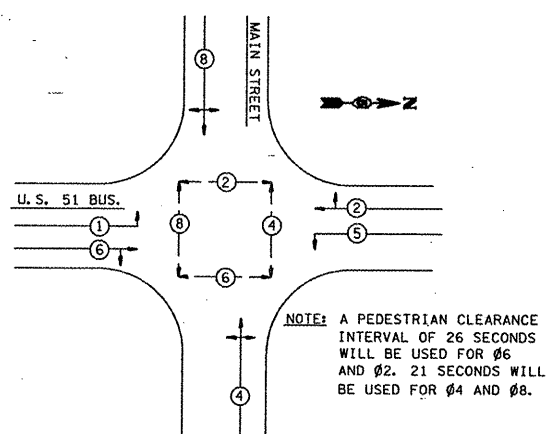
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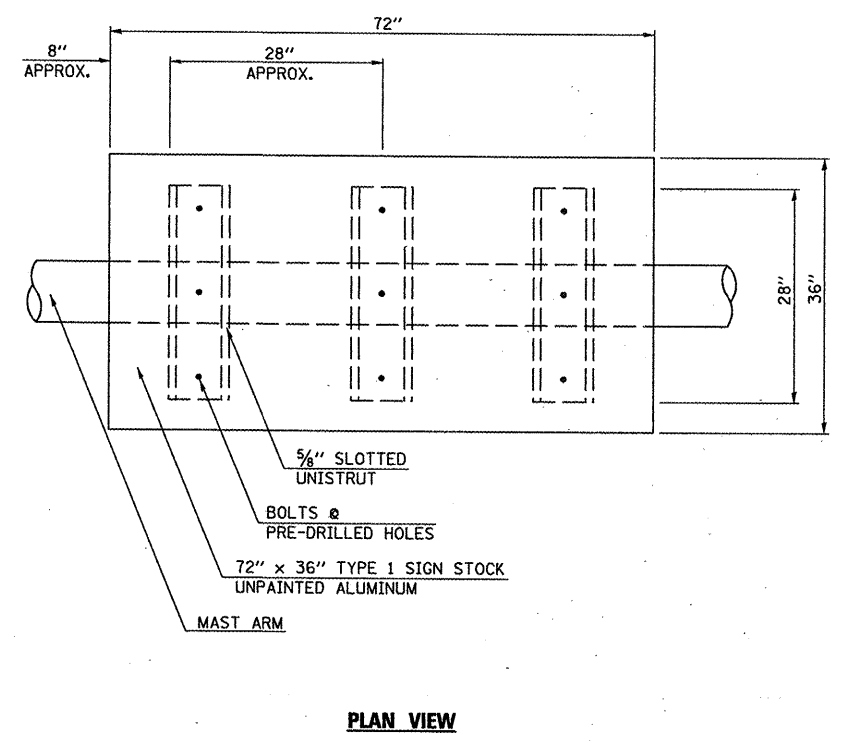
DETAIL OF SERVICE INSTALLATION MOUNTED ON CONTROLLER CABINET

PHASE DESIGNATION DIAGRAM

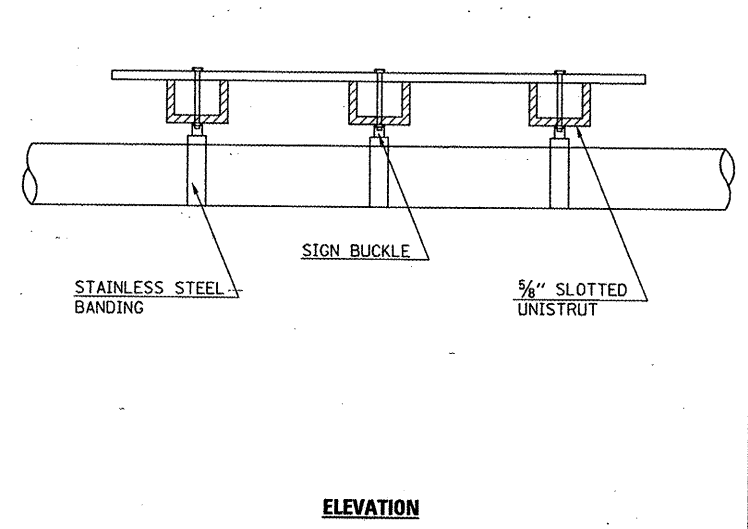


PEDESTRIAN PUSH-BUTTON SIGNS

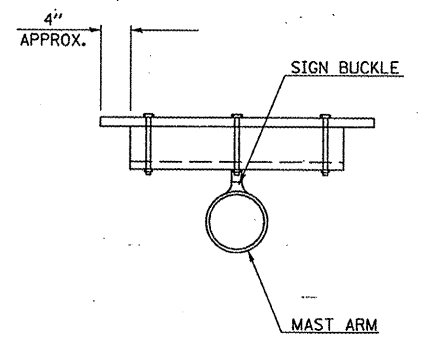
MAST ARM DAMPENING DEVICE MOUNTING DETAIL



PLAN VIEW



ELEVATION



CROSS SECTION

NOTE: PAINT ENDS OF UNISTRUT WITH SPRAY ON GALVANIZED PAINT

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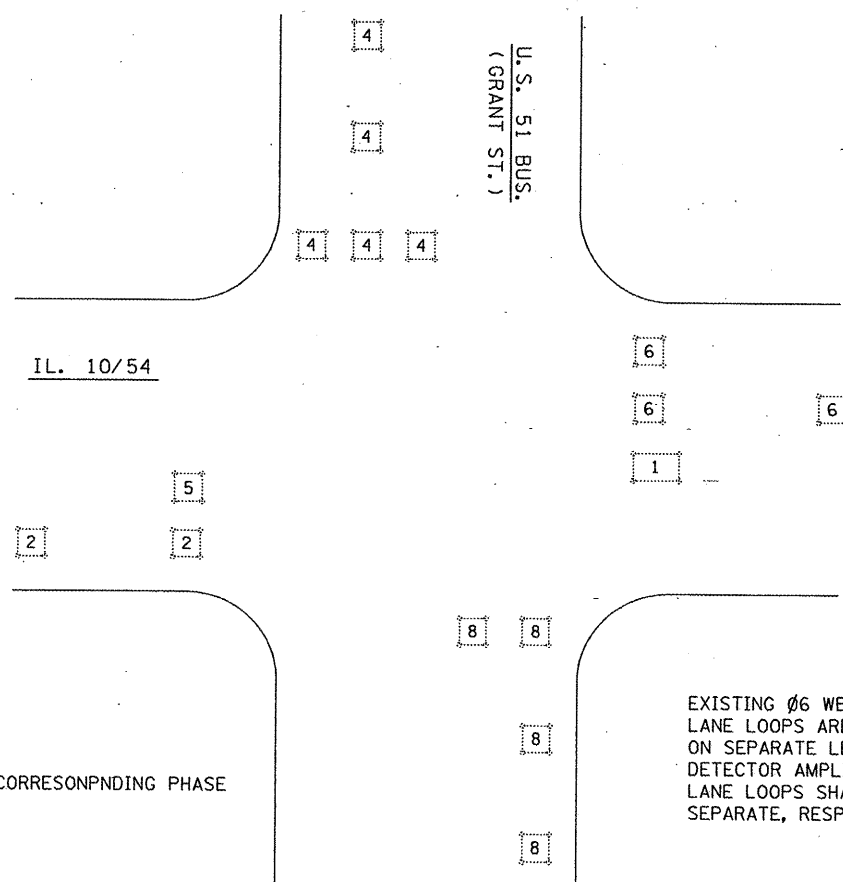
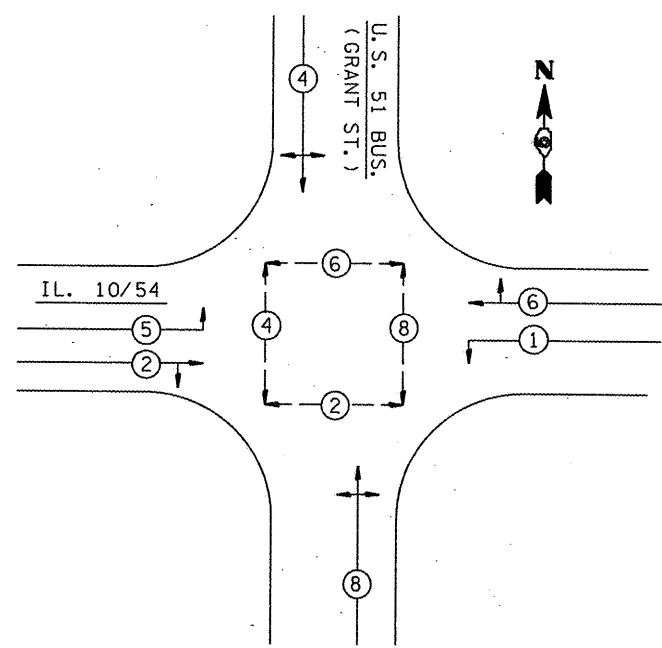
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SCALE:	SHEET NO.	OF	SHEETS	STA.	TO	STA.
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
.	4TS & 49TS	••	12	10
CONTRACT NO. 70821				
ILLINOIS FED. AID PROJECT				

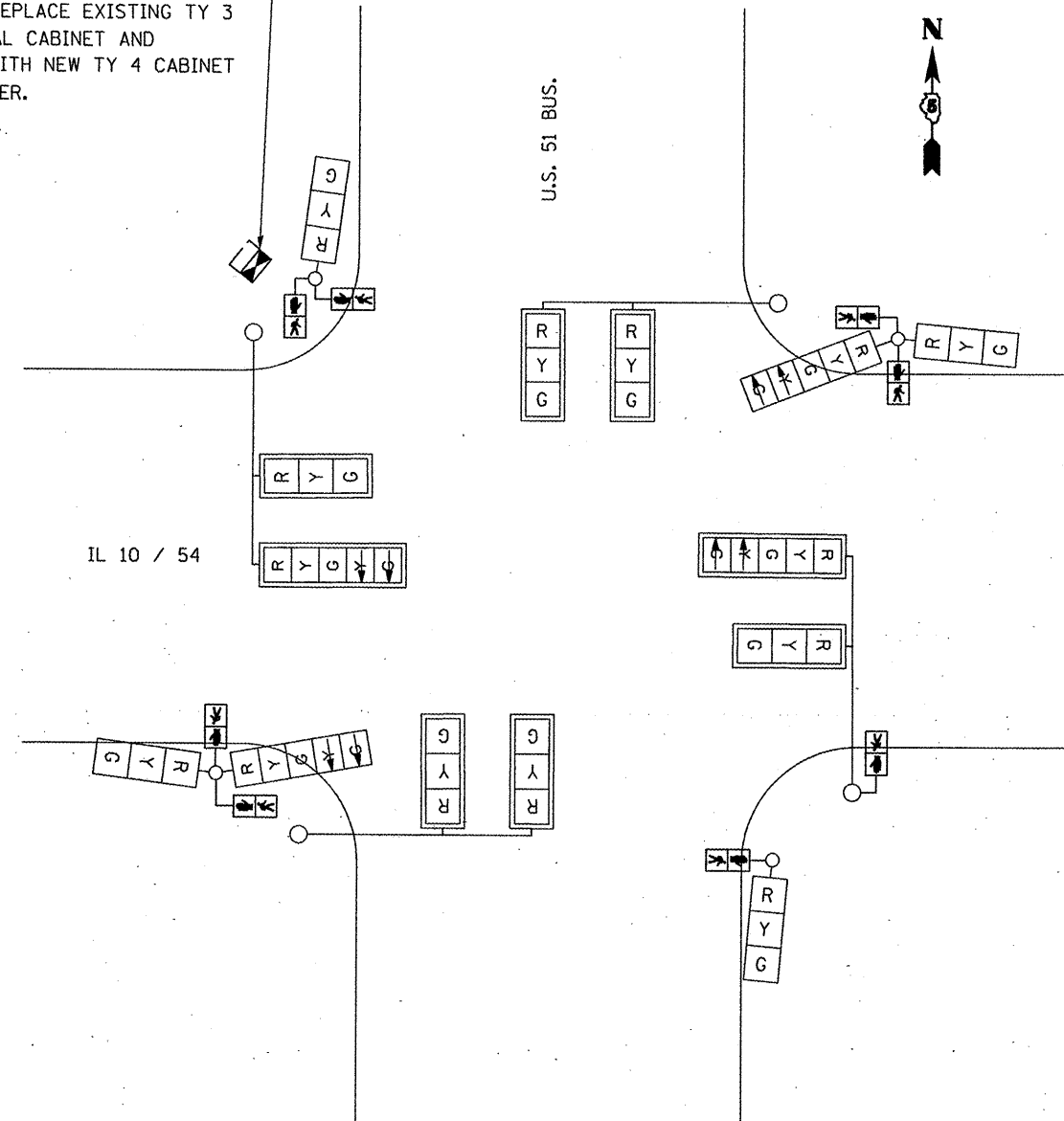
**PHASE DESIGNATION DIAGRAM**



5 DETECTOR LOOP W/ CORRESPONDING PHASE

EXISTING Ø6 WB RT TURN LANE AND THRU LANE LOOPS ARE GOING TO EX. CABINET ON SEPARATE LEAD-IN PAIRS BUT ON COMMON DETECTOR AMPLIFIER. Ø6 THRU AND RT TURN LANE LOOPS SHALL BE CONNECTED TO SEPARATE, RESPECTIVE DETECTOR AMPLIFIERS.

MODIFY EXISTING CONCRETE FOUNDATION  
REMOVE AND REPLACE EXISTING TY 3 TRAFFIC SIGNAL CABINET AND CONTROLLER WITH NEW TY 4 CABINET AND CONTROLLER.



**BILL OF MATERIALS**

U.S. 51 BUS. & IL 10 / 54

ITEM	UNIT	QUANTITY
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1
INDUCTIVE LOOP DETECTOR	EACH	16
MODIFY EXISTING CONCRETE FOUNDATION	EACH	1
REMOVE EXISTING TRAFFIC CONTROLLER AND CABINET	EACH	1
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, 2-SECTION, BRACKET MOUNTED, RETROFIT	EACH	8
SIGNAL HEAD ,LED, 1-FACE, 3-SECTION, BRACKET MOUNTED, RETROFIT	EACH	2
SIGNAL HEAD ,LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED, RETROFIT	EACH	6
SIGNAL HEAD ,LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED, RETROFIT	EACH	2
SIGNAL HEAD ,LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED, RETROFIT	EACH	2

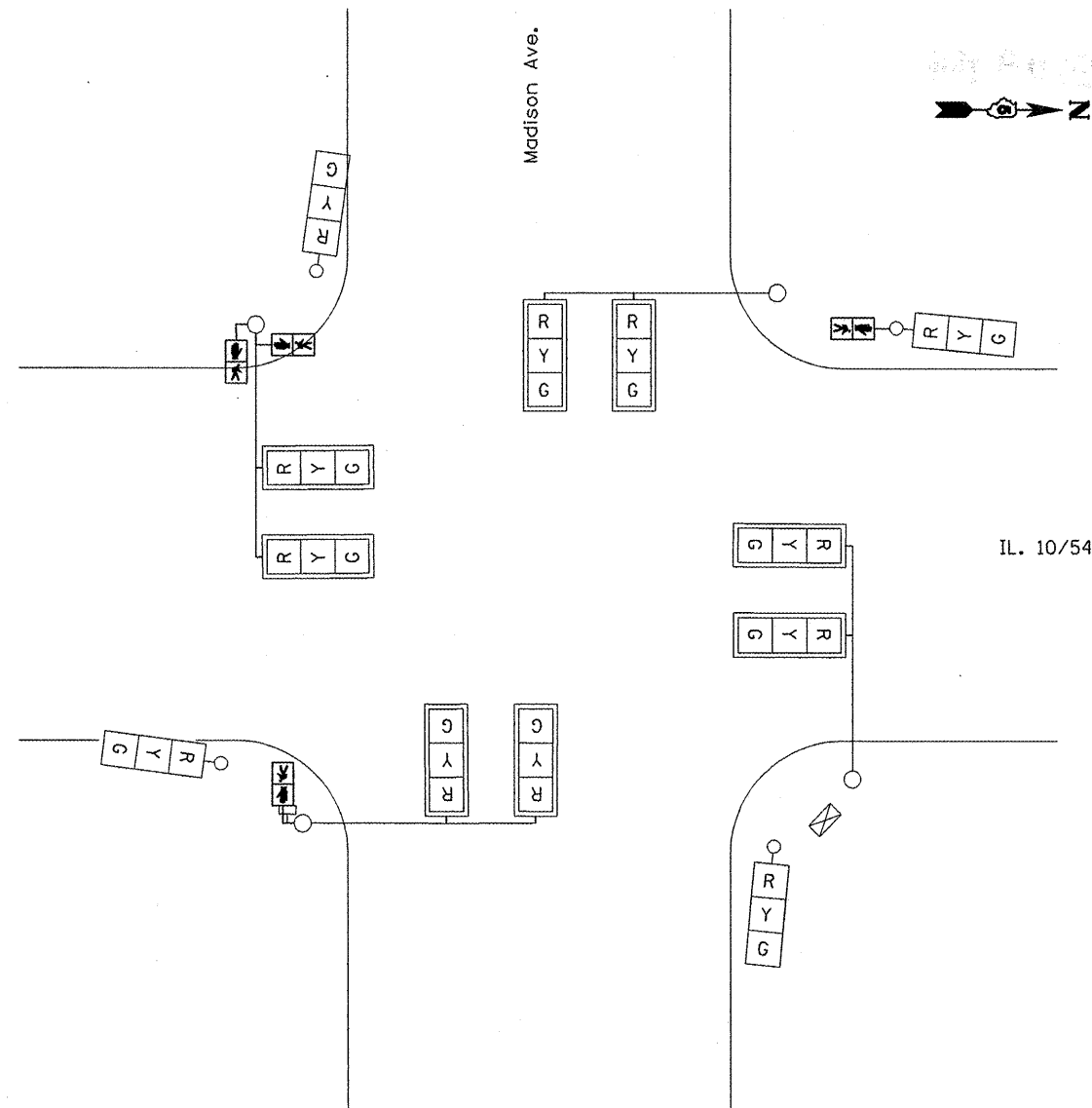
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.	4TS & 49TS	• •	12	11
			CONTRACT NO. 70821	
ILLINOIS FED. AID PROJECT				



**BILL OF MATERIALS**  
IL. 10/54 & MADISON ST.

ITEM	UNIT	QUANTITY
PEDESTRIAN SIGNAL HEAD ,LED, 1-FACE, 2-SECTION, BRACKET MOUNTED, RETROFIT	EACH	4
SIGNAL HEAD ,LED, 1-FACE, 3-SECTION, BRACKET MOUNTED, RETROFIT	EACH	4
SIGNAL HEAD ,LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED, RETROFIT	EACH	8

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